George's PINK PAGES

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ARTICLES:
Harvesting Honey
No Brood & No Queen! Do You Requeen?
Some IMPORTANT FUTURE DATES

Proper Time and Techniques of Harvesting Honey

Some might say, just suit up, light a big smoker, get a big bee brush, and ROB the honey in a big hurry. That was the standard procedure for centuries, but that can't be the standard procedure in an urban area where there are neighbors and children around, people who are frightened of bees and are willing to call the police or sue you. Further, if you don't harvest honey at the correct time, you might remove honey before it is fully ripened and well capped which might cause it to ferment; or you might remove too much of the colony's honey and the bees shut down their brood production and hence enter the winter with very light stores; or you might wait too long for harvesting and the bees move the honey from the supers into the brood chamber area.

In other words, harvesting honey is very much like cooking turkey or baking a cake. The are good ways and bad ways, and you can cook it too long or not enough. Hence, why not "do it RIGHT?"

In central Maryland, our nectar flow is usually over around May 31st and surely by June 15th. You may talk about all kinds of flora that you see at the Fourth of July, but year after year of daily observation of weight increase of a scale hive clearly indicates that there is little nectar gathered in the month of June with the possible exception of the time near May 31st.

Why is "time" of harvesting SO IMPORTANT? First of all, if you just don't bother to harvest until it gets cooler in September or even October, because you are hoping for a fall nectar flow, or it interferes with your summer vacation, or some 'old timer" told you that fall harvesting was "best", many detrimental things can happen to your bees and I can't think of anything good about waiting past about July 4th. If you harvest LATE, perhaps the bees have removed the honey from the supers and packed the brood chamber with honey, maybe your bees are very seriously infected with tracheal mites because you did not treat them with menthol in August when it is the CORRECT time to do it in central Maryland, or maybe they are next to death from Varroa mites because the queen has dramatically slowed her egg laying, your pretty white comb cappings are now all yellow with dirty feet travel stains, or maybe some of the fast crystallizing honey has already crystallized in the comb. Honey is easy to extract when very warm as in July, but very difficult when it is cool, as in September or October. You could not do late summer requeening (that I think is the best time) if the honey is still on the colonies. You could not enter your honey in any of the county FAIRS around the country side to show other people of your handiwork. To avoid all the above mentioned negative reasons for harvesting late, just harvest shortly after your major nectar flow ends, which means to harvest about the end of June for central Maryland. However, don't harvest too soon, which is that time when all the honey is not yet fully ripened, because this may cause your entire crop of honey to ferment and good for nothing unless you like vinegar. The bees will build a white capping over each honey cell when the honey in that cell has been ripened; and then it is safe for you to harvest. Some people take chances and extract frames that are only 60%-70% capped, and their greed often

catches them and their honey ferments. I don't extract a frame unless it is 90% fully capped, and never "put-up" a piece of comb honey that is not 100% capped.

I go into my supers about May 25th and remove any empty or nearly empty frames so that I reduce the number of supers on the colony by at least one super (10 frames). I might move all the frames not fully capped to the super next to the queen excluder, so these frames get quickly ripened and fully capped. This is the time to CROWD the bees, taking away as much empty space as possible, forcing the bees to fully fill what little space is left to fill and then fully cap the frame. Reference to this can be found on Page 618 of the 1992 Edition of The Hive and Honey Bee which states: "....the best approach may be to oversuper in the spring and to undersuper at the end of the honey flow. This will encourage rapid filling of the frames at the beginning of the major flow and will encourage consolidation of the honey stores at the end of the flow."

Years ago, most people removed the honey from a hive by removing one frame at a time and brushing the bees off, or using a Porter Bee Escape in the inner cover hole and "hoping" it would get cool enough at night, which it rarely does in central Maryland, for the bees to leave the supers via the Bee Escape. Today, these methods are about as obsolete as using your car's bumper jack to change a flat tire while out on I 95. Other than blowing the bees out of a super with an expensive ($300) bee blower, the BEST way, the FASTEST way, and the way that avoids bee STINGS is to use a fume board and one of chemicals that bees move away from: BeeGo, Honey Robber, or my favorite, Benzaldehyde. One or two ounces of any of these repellents on a fume board will "chase" the bees out of a super in 3-4 minutes and can be used many times for perhaps an hour before more repellent has to be added to the fume board. These repellents do not leave any odor with the honey.

The use of SMOKE during honey harvesting is not wise, because the bees may break into some of the capped honey to gorge themselves in the event they had to fly to a new home. If you select a good day for harvesting and the bees are busy and many out searching for more nectar, you simply remove the telescoping cover and the inner board, install your treated fume board, wait several minutes, remove that super, put the fume board in place on top of the next super down, then on the third super, etc., and there is almost no need for any smoke nor have you upset the bees. I must remind you that, unlike humans, bees do not think of removing of this honey as stealing or robbing, and are NOT upset or mad at you. Caste aside your anthropomorphic thinking!

Be VERY SURE that you cover the super immediately with some bee-proof screen or top to prevent both your bees and robbing bees from trying to "steal" that honey away from you. If not, prepare for mad neighbors and maybe even the police.

The BEST TIME to extract is at the same time you are removing supers, because the honey is "hive warm" and hence easy to extract. If you must wait to another day, stack the supers 5 or 10 supers tall, SEAL ALL POSSIBLE BEE ENTRANCES, and let the supers sit out in the broiling sun until the honey is quite warm, and then extract. If you just can't extract in warm weather, clean out a closet, stack the supers of honey in the closet, put a lighted 60 watt or 100 watt light bulb inside the closet, close the closet door, and let that honey warm for 24 hours.

You will have some frames that are NOT 90% or more fully capped. DON'T EXTRACT THEM. Put 9 of these frames in a super, and put that super back on a strong colony of bees over a queen excluder. The bees may fill that super and

fully cap the frames if another little nectar flow develops, or they might remove the honey from the super and pack it in the brood chamber frames as winter stores. In either case, it hasn't been "lost", but will be available to either you or the bees at a later date. So often bees of a greedy beekeeper die during the winter from starvation, or the beekeeper has to buy lots of sugar and feed his bees during the cold of February and March because his greed left the bees short of winter stores.

Only a fool would advise you to process your honey by heating it or NOT heating it. This brings on "wars" of different opinion and even fist fights. It is true that honey being processed for commercial sales is heated to temperatures as high as 160¡ and filtered through a commercial filter to remove any seeds of crystallization of the honey, thereby giving it prolonged "shelf life". The brood temperature of a bee hive averages about 94º, and super temperatures on a bright sunny hot July day may be 100º - 110º; and hence honey that is heated to a maximum of 100º - 110º is perfectly "natural". However, I DON'T use cheesecloth for filtering (straining) my honey because cheesecloth gives rise to tiny pieces of thread that act as starters for crystallization. I use only MANMADE fabrics like nylon or rayon to filter my honey, because it contains NO lint. You can buy these fabrics with all different kinds of mesh, some fine and slow filtering while others are coarse and therefore faster filtering. Some people use womens panty hose as a filter. I use 3 layers of marquisette (bridal net) for regular filtering, and I use women's slip material for special needs like "competition" honey.

Finally, what is the proper thing to do with all the sticky, wet extracted frames? Don't just set them out in the open for the bees to "rob", or you will start a new war like World War III among the your bees, other local bees, and your NEIGHBORS. Let one of your strongest colonies completely clean those frames "dry", but under controlled conditions that you arrange! Place a totally empty hive body on the inner cover, and then place 5-6 wet supers on top of that empty hive body, cover with a good top, and SEAL any top entrances. In a few days, all your supers will be nicely cleaned and "dried" so that you can remove them, treat them with para-dichlorobenzene to kill wax moth larvae, and store them for winter.

Let the whole world see the work that you, GOD, and your bees have provided for all people to enjoy by entering your honey and other hive products in the local county FAIRS. The winning ribbons are a fond remembrance and the money prizes are often enough to buy another super or two. And just think of all those nice people that you can meet and talk too at the FAIR, not only about bees, but flowers, veggies, wine, cheese, afghans, bed spreads, see the ribbon winning cows, horses, rabbits, and don't forget the pigs, and let your memories run rampant as you ponder the mysteries of the array of "old" things in the "Old Timers" display (maybe where I belong).

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A June Inspection - No Brood & No Queen Found
Do You Requeen? - How Soon?

Every year, I am besieged with inquiries from local people and e-mail inquiries from beekeepers over much of the U.S. and even some foreign countries with the question in this article's title.

If you can't find much brood, particularly "open brood" (eggs and larva), in a colony in May or June, something has happened to your queen. She has

either swarmed or has died. Are there any swarm queen cells, supersedure queen cells, or emergency cells? If you find any queen cells of any kind, are any of them capped, or has the capping been torn off? Finding a queen cell with a capping removed tells you that there is a virgin queen in your hive.

Many beekeepers, regardless of how long they have been keeping bees, have some difficulty finding a queen in their colony, particularly if she is NOT marked; and this problem is even worse when the worker bee population is high as it is in May or June. When one realizes that a virgin queen looks very much like a worker bee and does not really look like a queen bee until after she has been bred, this makes finding a virgin queen in your colony extremely difficult.

I have heard 100's of stories about telephoning a queen breeder and getting an emergency shipment of a new queen, installing her, and the bees kill her right away. Then there are the stories about transferring a frame of eggs from another colony to this "queenless" colony so they can raise a new queen, but the bees won't build a queen cell on the frame.

All of these frustrating experiences just prove that some beekeepers know very little about honey bee biology. I will explain the delay in laying.

Any time that you find a colony of bees with no "open" brood (eggs or larvae) present, particularly in the spring, DON'T ASSUME THE COLONY IS QUEENLESS, because in the great majority of cases, there is a queen present, but just hasn't started to lay eggs yet! Maybe the colony swarmed and left a virgin queen behind to take over the colony; or if the queen died naturally or by accident, the bees would raise a new virgin queen to replace their dead mother. I repeat - It is rare to find a truly queenLESS colony in the spring or summer months. Instead of thinking the colony is queenless, think that you have made a mistake and just could not find the new queen of the colony.

When a colony swarms, the old queen has layed very few eggs during the week before swarming in order to lose weight so she can fly. Hence on the day of the swarm, there is very little open brood present. Maybe the new virgin queen emerges from her swarm cell 4-5 days after the swarm leaves, and she does not gain sexual maturity until she is about 6 days old. If the weather is nice on the day the new queen turns 6-7 days old, she takes her nuptial flight to be mated; but if the weather is cool or rainy, she might not go out on her nuptial flight for several additional days. Once she is bred, she starts laying a few eggs, not many, about two days later. An egg remains an egg for 3 full days before it hatches into a larva. So, let's start counting time beginning with swarm PLANS:

Day 0 - Bees begin swarm planning and restrict feeding the queen, and eggs are layed in swarm cells
Day 9 - Swarm cells are capped, and swarm issues
Day16 - Virgin Queen emerges
Day23 - Virgin queen takes her nuptial flight
Day25 - Queen lays a few eggs
Day28 - These first eggs hatch into larvae, which is more easily seen by a beekeeper.

The example above assumes every happening takes place as soon as possible, and yet there are absolutely no eggs visible for 16 days (Day 9 - Day 25). In most cases, the time without any eggs being present is longer than 16 days and can be as long as 31 days in extreme situations.

If the old queen did not swarm but was superseded, essentially the same absence of open brood is about the same as the case of loss of queen by swarming, or 2-3 weeks.

Since the life span of a worker bee is just 6 short weeks, and the gestation period of a new bee is 3 weeks, it does not make good sense to install a new queen in a colony that has been barren of CAPPED BROOD for 3 weeks, because all bees will be dead before any of the new queen's brood emerges.

It is easy to TEST to see if a colony is queenless: Select a frame of eggs and VERY YOUNG larvae from another hive and place it in the suspicious colony. If the bees start building EMERGENCY CELLS on the face surface of the comb of that frame and surround a larva with royal jelly, the colony is queenless. However, it will take a minimum of 21 days for a new queen to emerge, breed, and starts laying eggs; and is she going to be a good queen or a bum? Speaking for myself, if I found a positive EMERGENCY CELL on the TEST frame, I would "run" to the phone and order a new queen from my queen breeder and I would expect her to be in my hands within 3 days and laying eggs a week later. Further, I would have confidence that my queen breeder is trying hard to breed HYGIENIC bees and that my choice of bee race is being maintained. I am not satisfied with just some unknown queen bred by some unknown drones, because they probably will not perform in the manner to which I have come to respect.

I end this note with an admonishment: Just because you don't see OPEN brood, don't ASSUME the colony is queenLESS! You can always TEST to prove the presence of a queen or not. ASSUMING things is a mark of a beeHAVER, not a beeKEEPER.

George Imirie

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IMPORTANT DATES

June 22nd and 23rd - A SPECIAL BEEKEEPER'S SHORT COURSE primarily designed to explain the NEW MANAGEMENT tool of IPM, Integrated Pest Management; and QUEENS and their management. As you have seen in my writings, I strongly believe that the use of IPM management and HYGIENIC Queens are the ultimate solution to keeping bees alive and healthy without the use of many chemicals. I intend to be present, taking notes, asking questions, and LEARNING. I heartily encourage every beekeeper to do the same, and maybe you can forget menthol, Apistan, CheckMite, Fumidil-B, grease patties, and maybe even Terramycin.

August 10th - August 19th - The MONTGOMERY COUNTY FAIR where you are expected to enter your honey in competition to win ribbons and PRIZE MONEY, work at Old MacDonald's Barn for 4 hours telling the public all the wonderments about honey bees, and encouraging spectators to go to my NEW SCREENED CAGE to watch "old George" open hives of live bees WITHOUT ANY PROTECTIVE CLOTHING OR VEIL and explain to the public that honey bees are NOT AGGRESSIVE, the term "killer bee" is a Hollywood myth, and the importance of honey bee pollination to our human food supply.

January 16th - January 19th in the "Jewel of the South" city of Savannah, Georgia is the annual meeting of the AMERICAN BEEKEEPING FEDERATION. Come and TALK to many of the country's most important bee scientists, researchers, queen

breeders, package bee producers, honey producers, and hobbyists (like you) and LEARN, LEARN, LEARN. Come on down with me and enjoy a warm vacation right after Christmas!